

Office of Human Capital (OHC)

ISO 9000 Implementation Team Audit Preparation Handbook

October 10, 2008

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Table of Contents

1.0 Purpose.....	Pg 2
2.0 Audit Requirements.....	Pg 3
2.1 Standards	
2.2 Quality Management Process Model	
3.0 Acronym List.....	Pg 7
4.0 Audit preparation Check List.....	Pg 8
4.1 MSFC's Quality Policy	
4.2 Customer Satisfaction and Continual Improvement Audit Check List	
4.3 Document Custodian Audit Preparation Check List	
4.4 Record Custodian Audit Check List	
4.5 Safety Coordinator Audit Preparation Check List	
4.6 Safety Audit Check List	
4.7 Credit Card Owner Audit Preparation Check List	
4.8 Manager Audit Check List	
5.0 ISO Function leads' Responsibilities.....	Pg 17
6.0 Organizational Quality Objectives.....	Pg 18

1.0 Purpose

Marshall Space Flight Center has been assessed and approved by National Quality Assurance, U.S.A against the following quality assurance management system standards: ISO9001: 1994 on May 15, 1998. ISO 9001:2000 on November 29, 2001. AS9100 on June 18, 2003. ISO 14001 on November 17, 2006.

The scope of ISO 9001 registration includes all products and services provided by the Marshall Space Flight Center. MSFC supports the NASA Agency infrastructure and is a major contributor to all its scientific and technical enterprises.

The scope of AS9100 registration is as follows: The design, development, production, installation and servicing of flight hardware, flight software, and associated ground support equipment interfacing with flight hardware and flight software

In order to continue our registration, MSFC is required to pass the triennial (recertification) audit every 3 years and a surveillance audit every 6 months. The NQA Audit is to ensure that MSFC continues to meet the requirements of the standards.

The purpose of this document is to provide guidelines to assist all Office of Human Capital employees in upcoming audit preparation.

NQA Surveillance Audits for ISO 9001/AS9001 and ISO 14001: October 28-31, 2008

2.0 Audit requirements

2.1 Standard ISO 9001:2000 clauses

1. Scope

- a. General
- b. Application

2. Normative reference

3. Terms and definition

4. Quality management system

- 4.1 General requirements
- 4.2 Documentations requirements
 - 4.2.1 General
 - 4.2.2 Quality manual
 - 4.2.3 Control of documents
 - 4.2.4 Control OF records

5. Management responsibility

- 5.1 Management commitment
- 5.2 Customer focus
- 5.3 Quality policy
- 5.4 Planning
 - 5.4.1 Quality objectives
 - 5.4.2 Quality management system planning
- 5.5 Responsibility, authority and communication
 - 5.5.1 Responsibility and authority
 - 5.5.2 Management representative
 - 5.5.3 Internal communication
- 5.6 Management review
 - 5.6.1 General
 - 5.6.2 Review input
 - 5.6.3 Review output

6. Resource management

- 6.1 Provision of resource
- 6.2 Human resources
 - 6.2.1 General
 - 6.2.2 Competence, awareness and training
- 6.3 Infrastructure
- 6.4 Work environment

7. Product realization

7.1 Planning of product realization

7.2 Customer related process

7.2.1 Determination of requirements related to the product

7.2.2 Review of requirements related to the product

7.2.3 Customer communication

7.3 Design and development

7.3.1 Design and development planning

7.3.2 Design and development input

7.3.3 Design and development output

7.3.4 Design and development review

7.3.5 Design and development verification

7.3.6 Design and development validation

7.3.7 Control of design and development changes

7.4 Purchasing

7.4.1 Purchasing process

7.4.2 Purchasing information

7.4.3 Verification of purchased product

7.5 Production and service provision

7.5.1 Control of production and service provision

7.5.2 Validation of processes for production and service provision

7.5.3 Identification and traceability

7.5.4 Customer property

7.5.5 Preservation of product

7.6 Control of monitoring and measuring devices

8. Measurement, analysis and improvement

8.1 General

8.2 Monitoring and measurement

8.2.1 Customer satisfaction

8.2.2 Internal audit

8.2.3 Monitoring and measurement of processes

8.2.4 Monitoring and measurement of product

8.3 Control of nonconforming product

8.4 Analysis of data

8.5 Improvement

8.5.1 Continual improvement

8.5.2 Corrective action

8.5.3 Preventive action

Upcoming audit preparation information can be found in the “Next Surveillance Audit” block at the top of the ISO 9001 web page:

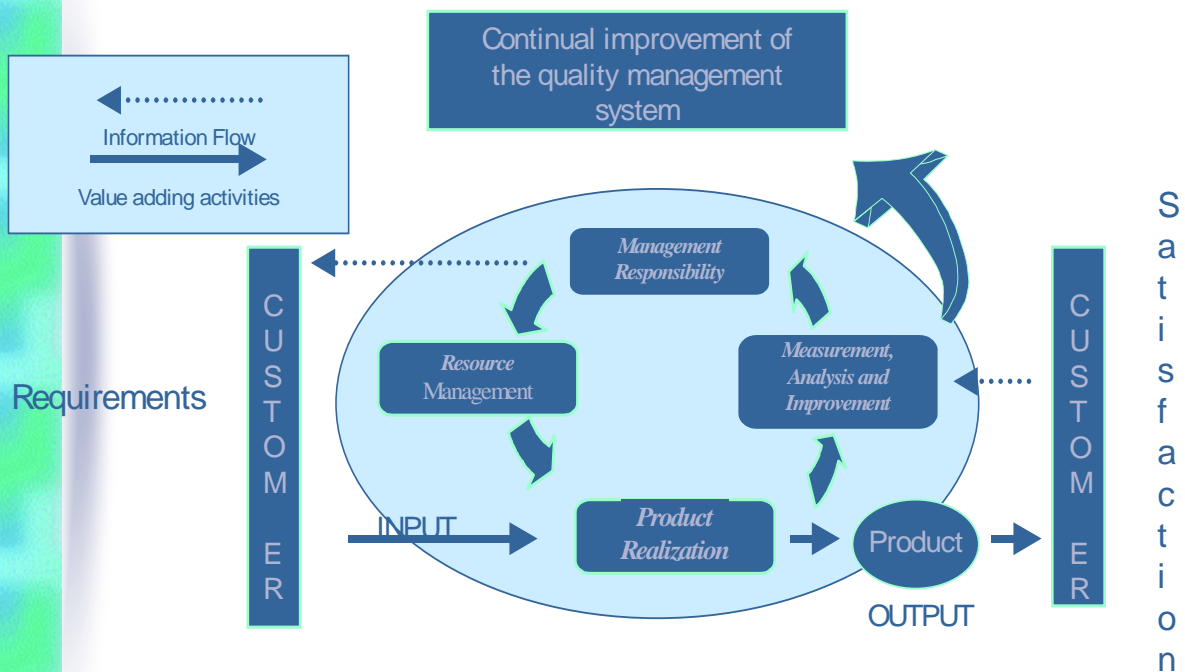
<http://iso9000.msfc.nasa.gov:9001/index.html>

http://iso9000.msfc.nasa.gov:9001/internal_audits/helpful_hints.htm

- Do What You Say, and Say What You Do.
- Plan, Do, Check, Act
- Focus on Quality Plans and Procedures and How the Plan Structure Supports Effectiveness Measures
- View Organizations Approach for Continuity Throughout Organization (Vision-Objectives-Metrics-Analysis)
- Understand Quality Records Structure and its Approach for Controlling Information/Data
- Evaluate Performance Measures Infrastructure and Resultant Data



Quality Management Process Model



* Extracted from ISO 9000, Figure 1

3.0 Acronym list

- 3.1 **Document Control Custodian (DCC)** The primary and alternate individual(s) responsible for processing and maintaining OWI's and Master lists. The DCC shall maintain the original signed hard copy of OWI's generated within the DCC's organizational element as a quality record. The DCC is responsible for assigning unique document numbers for new OWI's. OWI's will be numbered as follows: OOOO-XXX-YYY; OOOO indicates organization code, XXX indicates the type of organizational issuance (e.g., OWI), and YYY indicates the sequential number beginning with 001. The Organizational manager will appoint a DCC and Alternate for the organization.
- 3.2 **Master List (s)** The list of Organizational Work Instructions, applicable documents and other organizational issuances. The master list contains information regarding document number, title, effective date, location, and Office of Primary Responsibility (OPR).
- 3.3 **Organizational Work Instruction (OWI)** A document which defines the organizational process and Procedure. It is recommended to use the MSFC Organizational Issuances template.
- 3.4 **Organizational Issuances (OI)** Types of OI's include organizational work instructions, technical documents, forms, or special reports, and records.
- 3.5 **Office of Primary Responsibility(OPR)Designee** The author or other person responsible for maintaining the accuracy and currency of the OWIs from draft release through all follow-on actions.
- 3.6 **Process Owner (PO)** The individual who is responsible for a specific process within an OWI. The PO is responsible for maintaining the accuracy and currency of the data for the process. If the OWI contains only one process, then the OPR and the PO will be the same individual. If the OWI contains multiple processes, then the OPR will consolidate and integrate all the data, provided from the individual PO's.
- 3.7 **Quality Records.** A "record", of any kind, that furnishes objective evidence of activities performed or results achieved. That is, its nature is to capture something that has already happened.
- 3.8 **Record Custodian**
The individual who is responsible for collecting, indexing, accessing, filing, storing, maintaining, and dispositioning a record or collection of records.
- 3.9 **Records Liaison Officer (RLO)**
An individual designated by the Director/Manager of basic organizations (and, optionally, office) to assist in the director/manager and/or program/project data manager of the organization in identifying and dispositioning records through records custodians.
- 3.10 **Quality Objectives.** Those objectives that need to meet requirements for product are established at relevant functions and levels within the organization. The quality objectives shall be measurable and consistent with the quality policy.

Internal/Internal Audit preparation Check List

4.0 Audit Preparation Check List.

Knowledgeable about: ISO 9000 main homepage link: <http://iso9000.msfc.nasa.gov:9001/>

4.1 MSFC's Quality Policy

To provide quality products and services to our customers and partners through the NASA values: Teamwork Integrity and Mission Success
<http://iso9000.msfc.nasa.gov:9001/introductions/policy.html>

Marshall's Quality Management System Manual

A master list of Quality Management Systems Directives

<https://repository.msfc.nasa.gov/directives/component/main?dmfClientId=1212083872854>

4.1.1 Who is MSFC's ISO Management Representative? *Robin Henderson* And why we need to know about that?

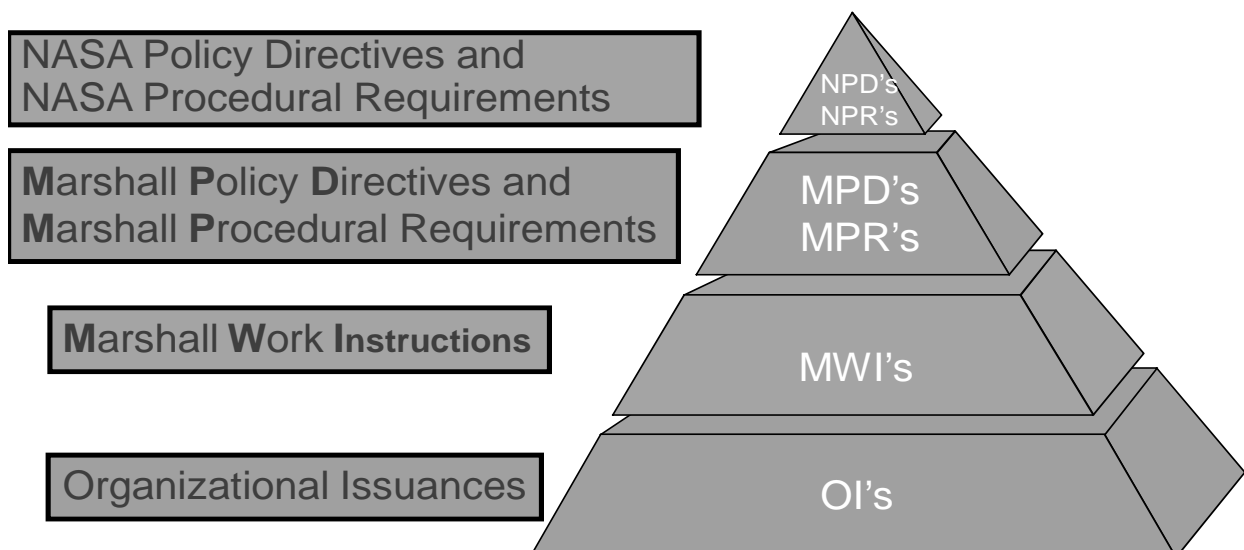
<http://iso9000.msfc.nasa.gov:9001/responsible/official.html>

Who is the Office of Human Capital's Marshall Management System (MMS) Representatives? (MMS used to be the MSFC ISO implementation team)

Primary representative: *Susan Cloud/HS01*

Alternate representative: *Cathy Fletcher/HS01*

Marshall Management System



4.1.2 Your Job Responsibilities, Products and Services and Customers

4.1.3 MSFC Center Policy, Guidelines, Procedures, and Organizational Work Instruction that you use for your job.

MSFC Integrated Document Library: <http://midl.msfc.nasa.gov/>

Marshall Management Toolbox: http://ohc.msfc.nasa.gov/internal/mms_toolbox.html

Quality Records, where located and the record retention schedule.

<http://avmcc.msfc.nasa.gov/recman/>

Office of Human Capital ISO web Site

http://ohc.msfc.nasa.gov/internal/mms_toolbox.html

4.1.4 How to use the Corrective Action and Preventive Action system

http://iso9000.msfc.nasa.gov:9001/special_emphasis/ca_pa/ca_trifold.pdf

4.1.5 Customer Feed Back

<http://qualcomm.msfc.nasa.gov/apps/qualcomm/>

4.1.6 Quality Objectives

The MSFC Center Director shall ensure that quality objectives, including those needed to meet requirements for product, are established at relevant functions and levels within the organization. The quality objectives shall be measurable and consistent with the quality policy.

4.1.7 Organizational Work Instructions

The OWI that you use for your work.

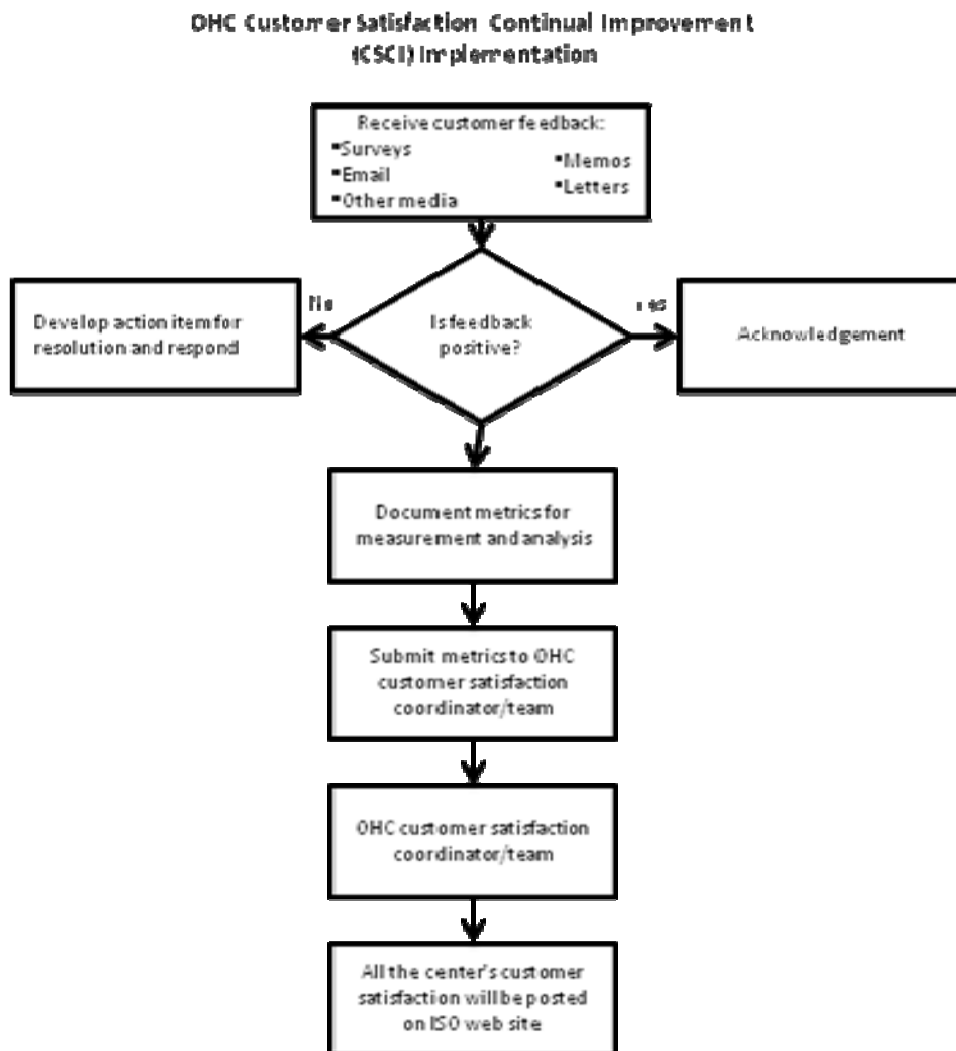
http://ohc.msfc.nasa.gov/internal/mms_toolbox.html

4.2 Customer Satisfaction and Continual Improvement Audit Preparation list

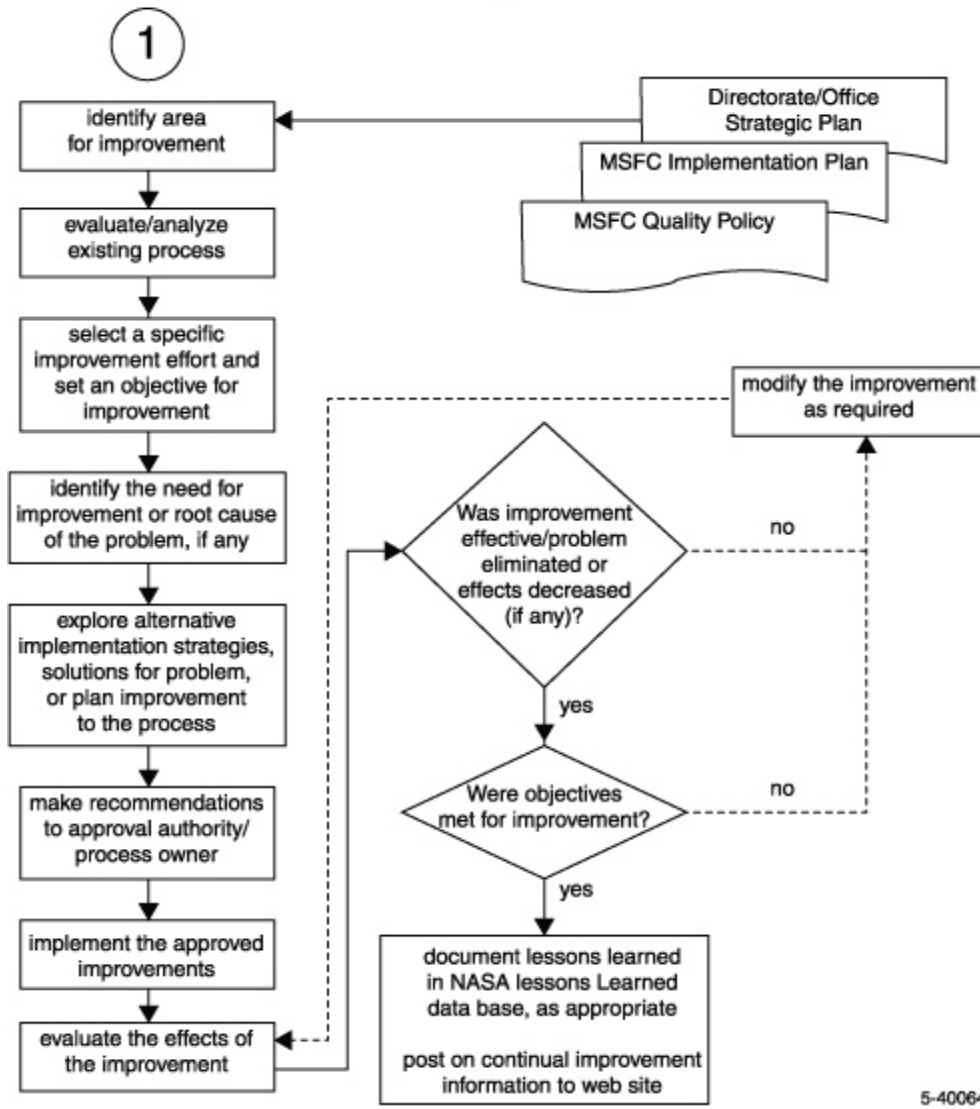
What is your Customer feedback system?

What is your process for continual improvement?

Do you have a performance metrics system?



Continual Improvement Flow



5-40064

4.3 Document Custodian Audit Preparation Check List

4.3.1 Familiar with the Office of Human Capital Document Control Process

HS01-OWI-001, Office of Human Capital Document Control Process

<http://ohc.msfc.nasa.gov/internal/iso/hs01.html>

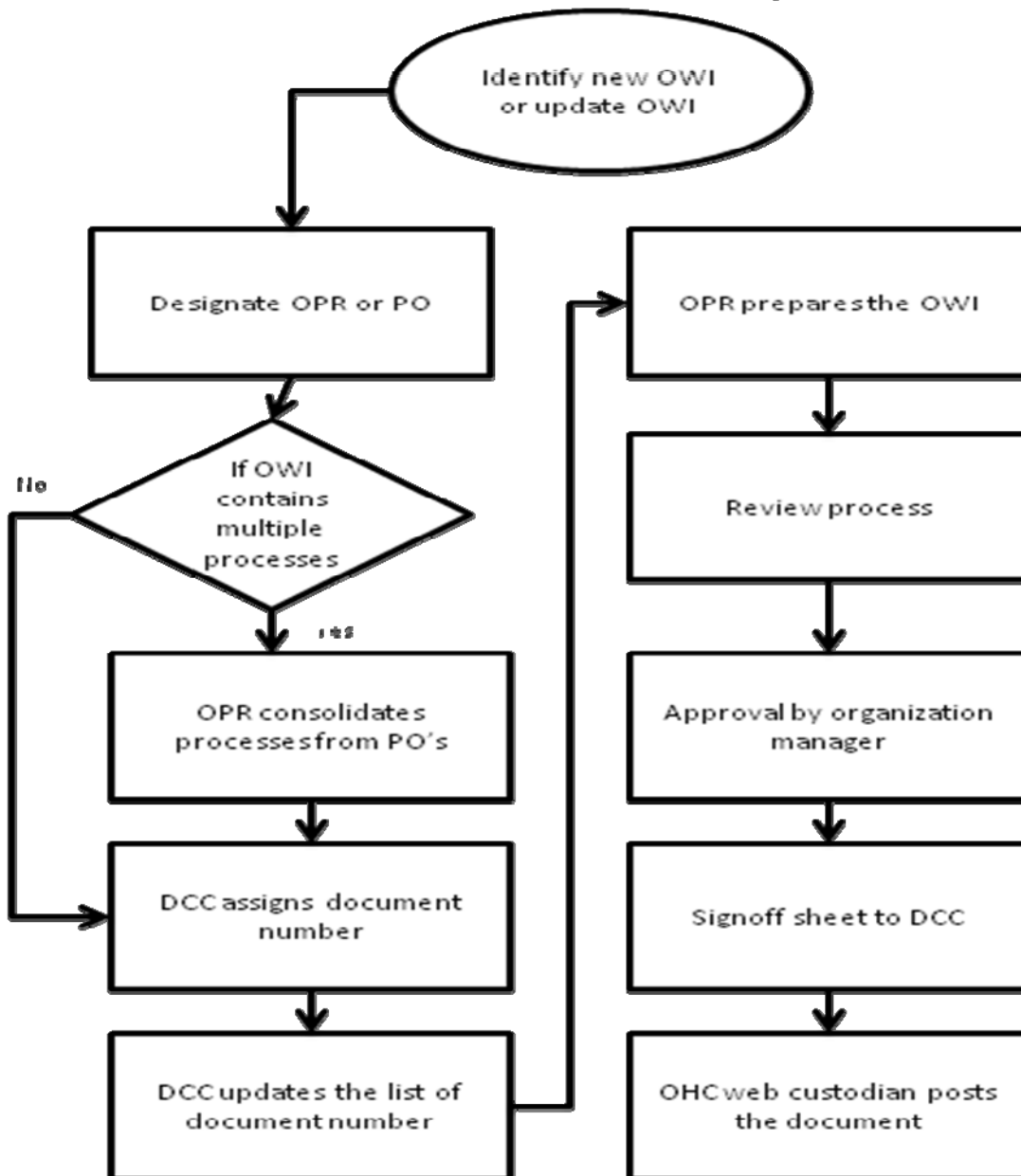
4.3.1 Verify your organization Documents:

4.3.2 Organization Master List

4.3.3 Reference to Obsolete Documents

4.3.4 Ensure that manager reviewed and signed the approval sheet within last 6 months

OHC OWI's Document Control Process Flow Diagram



4.4 Record Custodian Audit Check List

4.4.1 Familiar with NPR1441.1 NASA Record Retention Schedules

http://nodis3.gsfc.nasa.gov/lib_docs.cfm?range=1

Familiar with MPR1440.2 MSFC Records Management Program

https://repository.msfc.nasa.gov/directives/component/main?_dmfClientId=1212084669581

Familiar with HS01-OWI-003, Office of Human Capital Record Management Plan

<http://ohc.msfc.nasa.gov/internal/iso/hs01.html>

4.4.2 Understand Record Custodian's Responsibility

Record Custodian. The individual who is responsible for collecting, indexing, accessing, filing, storing, maintaining, and dispositioning a record or collection of records.

Records Custodians (RC's) are responsible for maintaining and furnishing information from the records assigned to them. Specific responsibilities include:

Keeping current on the records management regulations and procedures and on the functions of record-keeping offices.

Maintaining an up-to-date Records Plan.

Properly identifying, arranging, and disposing of records in accordance with NPR 1441.1, MPR 1440.2, and the Organizational Work Instructions (OWIs). Retire the record to a Federal Records Center when/as required. (Records retired to a Federal Records Center are maintained in accordance with 44 U.S. C. Chapter 21, 36 CFR Chapter 12, and National Archives and Records Administration procedures.)

Reviewing assigned records at least annually to ensure that only necessary records are being retained.

Coordinating records problems with the Records Liaison Officer or the Marshall Records Manager.

Establishing and maintaining documented procedures/instructions for controlling records (may be included in the applicable procedural document) in conformance with identification of records in the organization's Records Plan.

4.4.3 Familiar with organizational Record Retention Schedule

4.4.4 Ensure that Record Retention Schedule is correct.

4.4.5 Ensure that all records are located at the place that Record Retention Schedule indicated.

4.4.6 Ensure that OWI, Quality Records are consistent with the Record Retention Schedule data.

4.5 Safety Coordinator's Audit Check List

4.5.1 Safety meeting minutes, sign in sheet (Monthly)

4.5.2 Safety walk through records (Safety violations records)

4.5.3 Fire Extinguishers monthly checkup

4.5.4 All Employees are familiar with SHE and the purpose

4.5.5 All Employees must have JHA (*Job Hazard Analysis*)

4.5.6 Housekeeping rules must be posted and followed.

4.6 Safety Audit Check List

— **** Remember: Safety is everyone's responsibility. Any employee has the right to stop an unsafe action**

- The SHE policy is:
 - **Safety:** MSFC strives to prevent human injury and ensure the safety of all operations and products leading to mission success.

Health: MSFC strives to prevent occupational illnesses and promote and maintain the physical and mental well being of its employees to help ensure mission success.

Environmental: Enabling Marshall's mission by providing environmental compliance and stewardship.

The Office of Human Capital is adopting the Center's Safety Goal – Establish MSFC as Number One in Safety Within NASA.

- Safety Objective – Zero lost time mishaps; no OSHA recordable violations; no safety related property damage greater than \$1M; and no inflight safety anomalies.
- Know how to report safety problems. First to supervisor and if no action taken, then SCRS Reporting System.
- Know your rights and responsibilities.
- Know what OSHA stands for – Occupational Safety and Health Administration.
- Know what a Materials Safety Data Sheet (MSDS) is.
- Know what the SHE stands for – **Safety, Health and Environmental.**
- Be able to locate your safety records. These are considered Quality Records and should be kept for three years.
- Be sure to use the updated version of MSFC Form 4286 (Jan. 2002) when conducting your monthly safety inspections. Record your walk thru in SSWP and place the form in the file. Retain for 3 years.
- MPR 8715.1 is the Marshall Safety, Health, and Environmental (SHE) Program guideline. All safety related items for the Center are listed in this document. A good source of reference.

- All employees should be familiar with the evacuation route for their floor.
- All employees should know where to meet upon evacuation of the building.
- Safety Representative for each Org should account for each individual after evacuation.
- Emergency phone numbers are posted on all phones at MSFC.
- Housekeeping rules are to be posted in a general area and followed.
- Post permits (MSFC Form 3798) for heat producing appliances.
- No power strips or extension cords connected in a series.
- Each employee should have a Job Hazard Analysis (JHA).
- Be sure to keep your safety sign in sheets from your monthly safety meeting.

4.7 Credit Card Owner Audit Check List

- 4.6.1 Familiar with MWI 5113. 1 Government wide commercial purchase card operating procedure
https://repository.msfc.nasa.gov/directives/component/main?_dmfClientId=1212084669581
- 4.6.2 What is purchase limit for a single order, and what is monthly limit?
- 4.6.3 Where can you find the vendor code you need for a purchase?
- 4.6.4 Purchase Record
- 4.6.5 Who is your primary Signature authority, and alternate signature authority

4.8 Manager Audit Check List

What is your job?

What is your goal and organizational objectives?

How has the quality system been implemented within your organization?

Has it been effective? What are some positive results since implementing the system?

What do you feel is the manager's responsibility in order to have an effective quality system? Or what does a manager have to do?

What have you, as a manager, done to ensure that employees are aware of and operate under the MSFC quality management system?

How do you communicate your expectations to your employees?

Do you feel you have the resources available to your organization to effectively product quality products?

Are there any records maintained in your office? Who is the custodian?

What is MSFC's Quality Policy?

How do you handle the corrective action when customer complaints?

How do you implement your customer satisfaction and continual improvement system?

5 ISO Function Leads' Responsibilities

Function	Requirements
Organization Representatives (Primary)	<ol style="list-style-type: none"> 1. OHC ISO implementation team member 2. Ensure HSXX meet MSFC, OHC ISO requirements 3. Oversight HSXX ISO implementation, Audit preparation 4. Ensure all ISO Function leads provide proper support
Organization Representatives (Alternate)	<ol style="list-style-type: none"> 1. Provide Lead function when Primary representative is not available 2. Provide Proper support that HSXX OPR needs for ISO implementation, and Audit preparation 3. Provide Consultant to Primary OPR and ensure that HSXX meets the ISO requirement
Document Custodian	<ol style="list-style-type: none"> 1. Ensure that HSXX Document Control process meet the Center Requirement
HSxx-OWI-00X	<ol style="list-style-type: none"> 1. Ensure HSXX Consolidated OWI updated when necessary 2. Ensure that HSXX process owners review the process and make the updates
Record Custodian	<ol style="list-style-type: none"> 1. Knowledgeable about all HSXX Record Management 2. Ensure that all Process Owner provide correct information on the record retention schedule. (What, where, and when) 3. Maintain Record Retention Schedule
Safety Coordinator	<ol style="list-style-type: none"> 1. Provide Records for Safety meeting 2. Keep HSXX Safety walk through and other Safety records
Credit Card Owner	<ol style="list-style-type: none"> 1. Knowledgeable about MSFC Credit Card Process Procedure 2. Keep Records on Credit Card Purchase
Export Control Officer (Primary)	<ol style="list-style-type: none"> 1. Knowledgeable about Center Export Control Process 2. Keep Export Control Records 3. Know how to address Export control element within the Tech TracS
Export Control Officer (Alternate)	<ol style="list-style-type: none"> 1. Knowledgeable about Export Control Process 2. Be alternate to the Primary Export Control Officer when Primary officer is not available 3.
Internal Auditor	<ol style="list-style-type: none"> 1. Provide internal Audit for HSXX 2. Knowledgeable about all ISO requirements 3. Ensure that all HSXX employees, contractors are ready for audits

6.0 Organizational Quality Objectives

HS01:

Office of the Director

- To lead strategic planning within the Office of Human Capital
Metric: Develop and document OHC strategies annually
- To promote safety awareness and prevention to Office of Human Capital employees by following-up on all lost-time accidents within the office
Metric: 100% follow-up on all lost-time accidents within OHC (identify root cause of lost time accidents; ensure preventive measures are implemented when possible; and 0% late corrective actions)

2009 Agency, MSFC and OHC Goals, Objectives, and Metrics

Agency Goals and Objectives (MSFC has 6 of 7)

2009 Goals provided to Center Directors after the 2008 NASA SMC and OMC

Flying the Shuttle as safely as possible until its retirement, not later than 2010.	Complete the International Space Station consistent with NASA's international commitments, and use the station as a national laboratory for scientific research, engineering development, and operational experience for exploration.	Develop new human spaceflight capabilities to return to the Moon by 2020, establish a sustained human presence there, and prepare for human missions to Mars and beyond.	Carry out missions of scientific discovery to advance and communicate knowledge of our planet, solar system and universe.	Conduct research to advance U.S. technological leadership in aeronautics.	Pursue partnerships with the emerging commercial space sector.	Provide critical institutional and program capabilities to support NASA's missions.
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MSFC Objectives

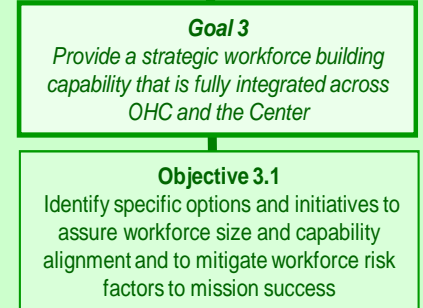
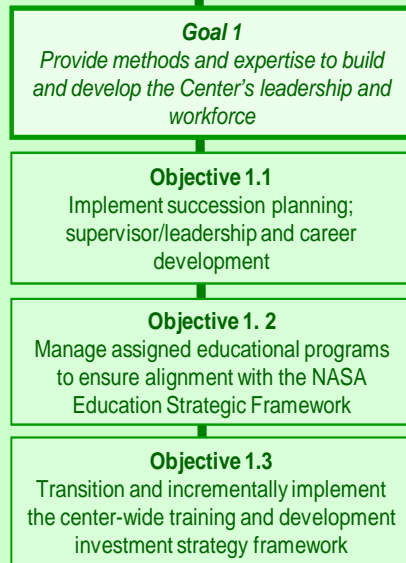
Center Director's Performance Objectives: Lead MSFC by providing executive guidance and institutional support to its programs, projects, and research activities in support of the U.S. Space Exploration Policy and NASA's identified strategic goals. Provide institutional engineering, independent technical assessment, and safety and mission assurance to programs and projects. Develop, implement, and sustain ground facilities and infrastructure and maintain and enhance Center human capital including core competencies, succession planning, and institutional engineering capabilities required to support program, project, and mission needs. Provide a healthy and safe work environment.

Associate Director's Performance Objectives: Provide executive leadership for institutional support to MSFC assigned programs, projects, and activities that support the U.S. Space Exploration Policy and NASA's identified strategic goals. Develop, implement, and sustain infrastructure, including institutional engineering capabilities, and maintain and enhance Center human capital, including core competencies, succession planning, and other Agency workforce goals required to support program, project, and mission needs. Provide a safe and healthy work environment.

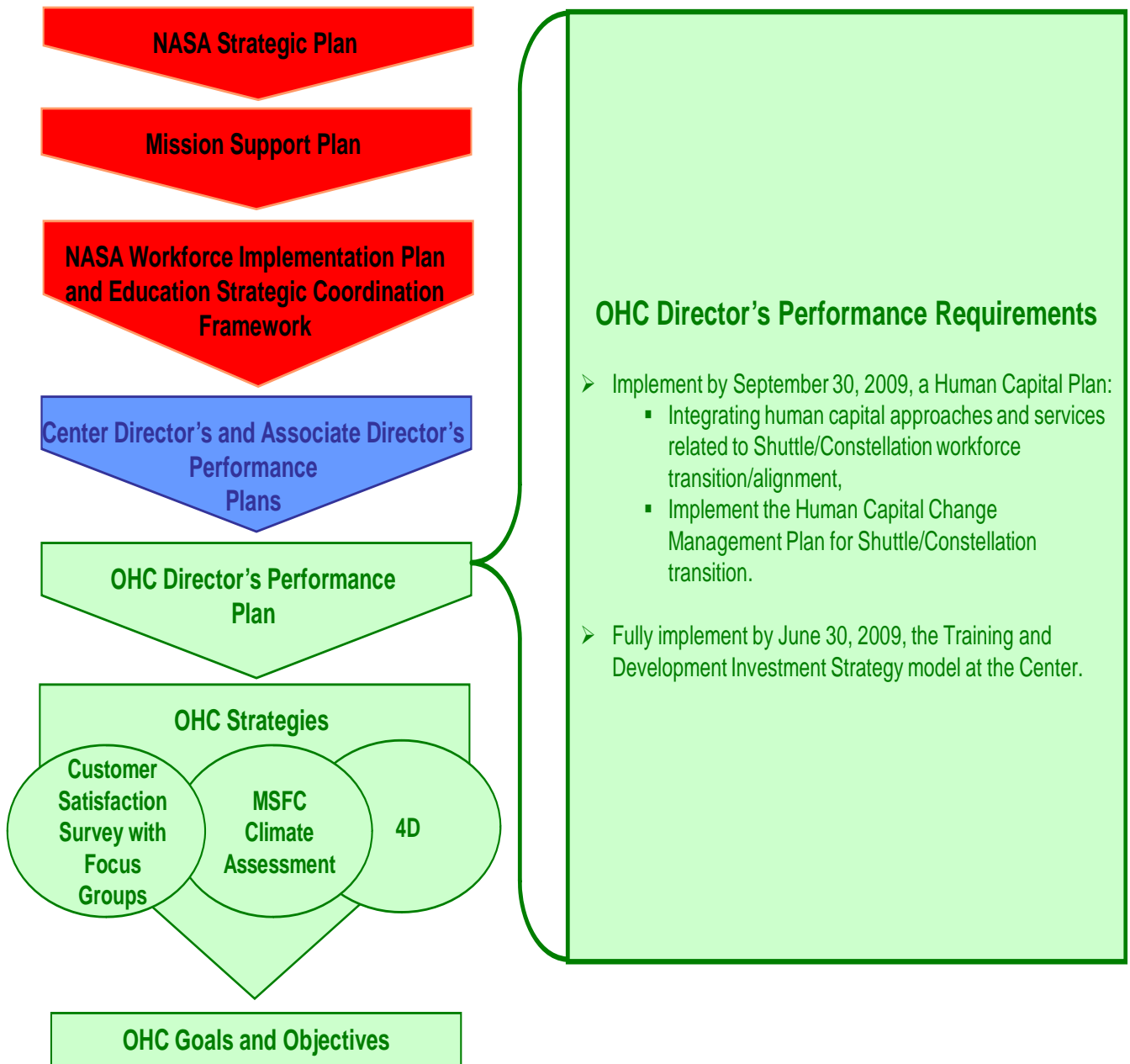
OHC Director's Performance Objective

Provide executive leadership in the areas of Organizational and Leadership Development, Workforce Planning, Academic Affairs, Training and Incentives, and Employee Services aligned to the U.S. Space Exploration Policy, NASA's strategic goals, and in support of MSFC assigned programs, projects, activities and tasks.

OHC Goals



Rev: October 2, 2008, 1 p.m.



Rev: October 2, 2008, 1 p.m.

R	Y	G	Obj Owner	OHC Objectives	Due Date	Status	Updated 10/2/08
Talent Wheel: Planning and Positioning for Future Success/Acquiring Talent/Developing Talent/Achieving High Performance/Retaining Talent/Operational Excellence (Crosscutting all of OHC)							
			HS01	Develop and implement Career Pathing for S&MA Engineers	09/30/09		✓
			HS01	Fully implement FY09 OHC Training and Development by 09/30/09	09/30/09		✓
			HS01	Assess all OHC Objectives including Mentoring Program	09/30/09		✓
			HS10	Implement the Succession Management Plan in accordance with the milestones in the project plan.	09/30/09		✓
			HS10	Conduct five New Supervisory Orientations in FY09	09/30/09		✓
			HS10	Conduct two New Employee Orientations in FY09	09/30/09		✓
			HS10	Implement a valid and reliable customer satisfaction process and survey aligned with Talent Wheel and supporting operations	09/30/09		✓
			HS10	Develop a process to measure response rate of calls and emails received from customers.	08/01/09		✓
			HS20	Finalize FY09 Workforce Strategy and Plans by the end of the first quarter	07/14/09		✓
			HS20	Develop FY09 Workforce Strategy and Plans by the end of the second quarter	03/31/09		✓
			HS20	Support the Center Shuttle Transition in accordance with the project plan and integrated schedule.	09/30/09		✓
			HS30	Establish a baseline of FY08 higher education student support project participants then track the participants against the OMB-approved NASA Education outcome measure (1.2.2) by the end of the first quarter.	12/31/08		✓
			HS30	Convert the OHC Recruiting Plan into an Organizational Work Instruction (OWI) in accordance with the milestones in the project plan.	09/30/09		✓
			HS40	Continue to provide Training Investment Strategy in accordance with the milestones in the project plan by the end of the fourth quarter in FY09.	09/30/09		✓
			HS50	Align MSFC staffing metrics with NASA's staffing metrics by the end of the FY09	09/30/09		✓
			HS50	Develop by the end of the first quarter and conduct by the end of the second quarter four workshops for supervisors on developing measurable performance standards.	12/31/08, 03/31/09		✓